APPENDIX 7

Supplemental Response to Comments

HawkWatch International
1986 - 2011

Attention: Alta East Wind Project
Bureau of Land Management
California Desert District
22835 Calle San Juan de Los Lagos
Moreno Valley, CA 92553

Dear Mr. Jeff Childers:

We thank the Bureau of Land Management (BLM) for this opportunity to comment on the Draft Plan Amendment (PA) and Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) for the proposed Alta East Wind Project (AEWP; CACA 52537) on private and public lands in Kern County, California. We at HawkWatch International, a non-profit conservation science organization that specializes in birds of prey and with raptor experience and knowledge specific to wind development, wish to offer our input at this juncture in the planning process. We recognize that diversifying our American energy portfolio by adding renewable resources such as wind power is necessary to help reduce the threat of climate change and reduce our dependency on fossil fuels. However, we also stress that only through proper consideration of raptors and other wildlife can we reasonably reduce the potential risks that accompany wind, or other forms of development, for birds of prey. Please consider our comments below based on our careful review of the draft AEWP PA/DEIS/DEIR. 1

First, we commend the BLM for appropriately requiring the following mitigation measures from the project proponent: development of an Avian Protection Plan and Eagle Conservation Plan, pre-construction surveys and application of seasonal nest protections when necessary, management of prey resources near turbines through vegetation exclusion, post-construction surveys and mortality monitoring, and construction of power lines to Avian Power Line Interaction Committee (APLIC) standards.

Also, of the "action" (i.e., wind development) alternatives considered, we agree that Alternative C has the greatest potential to reduce impacts to sensitive wildlife, including Golden Eagles. Alterative C, as currently written, would remove 9 turbines from the northern portion of the proposed site (i.e., north of Highway 58) due to concerns related to active (3) and inactive (10) Golden Eagle nests and documented eagle activity in this area of the project. Removing this portion of the project also reduces the likely impacts to desert tortoises. However, we believe careful consideration of the raptor and eagle data reported in the PA/EIS/EIR suggests greater mortality risk and/or uncertainty than is clearly presented in Chapter 3 (Affected Environment) and Chapter 4 (Environmental Consequences) and as a result, further curtailment of northern turbines and additional mitigation strategies may be warranted as discussed below. 2

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First, the Golden Eagle nesting data collected by environmental consultant WEST in 2 consecutive years suggests birds are nesting to the north of the project area in the Tehachapi Mountains (pg. 3.21-22). Appropriately, BLM is advocating for curtailment of 9 northern turbines (Alt. C). However, the increase in total nests found between the 2 years (2010: 2 active and 2 inactive; 2011: 3 active and 13 inactive; pg. 3.21-22) raises concern over the completeness of the aerial surveys. Golden Eagles often maintain multiple alternate nests in a single territory, but do not regularly build new nests (i.e., the same nests are defended for many years; Kochert et al. 2002); therefore, it is unlikely that many of the additional nests detected in 2011 were new, but more likely they were missed in 2010. It is reasonable to suspect that further survey effort would uncover additional nests. Surveys from the nearby Tehachapi Wind Resource Area suggest Golden Eagles occupy the area at moderate to high population density (pg 4.21-7). Removal of the northernmost 9 turbines under Alternate C would add provide a ~4-mile buffer between the nearest active nest and turbines and a 2.2-mile buffer from the inactive nest. Further removal of an additional 8 turbines on the ridgeline south of Hwy 58 in the central project area (see Figure 1 below) would provide an additional buffer of 0.5-mile from these active and inactive nests and any potential undiscovered Golden Eagle nests that may be present in the hills to the north of the project area.

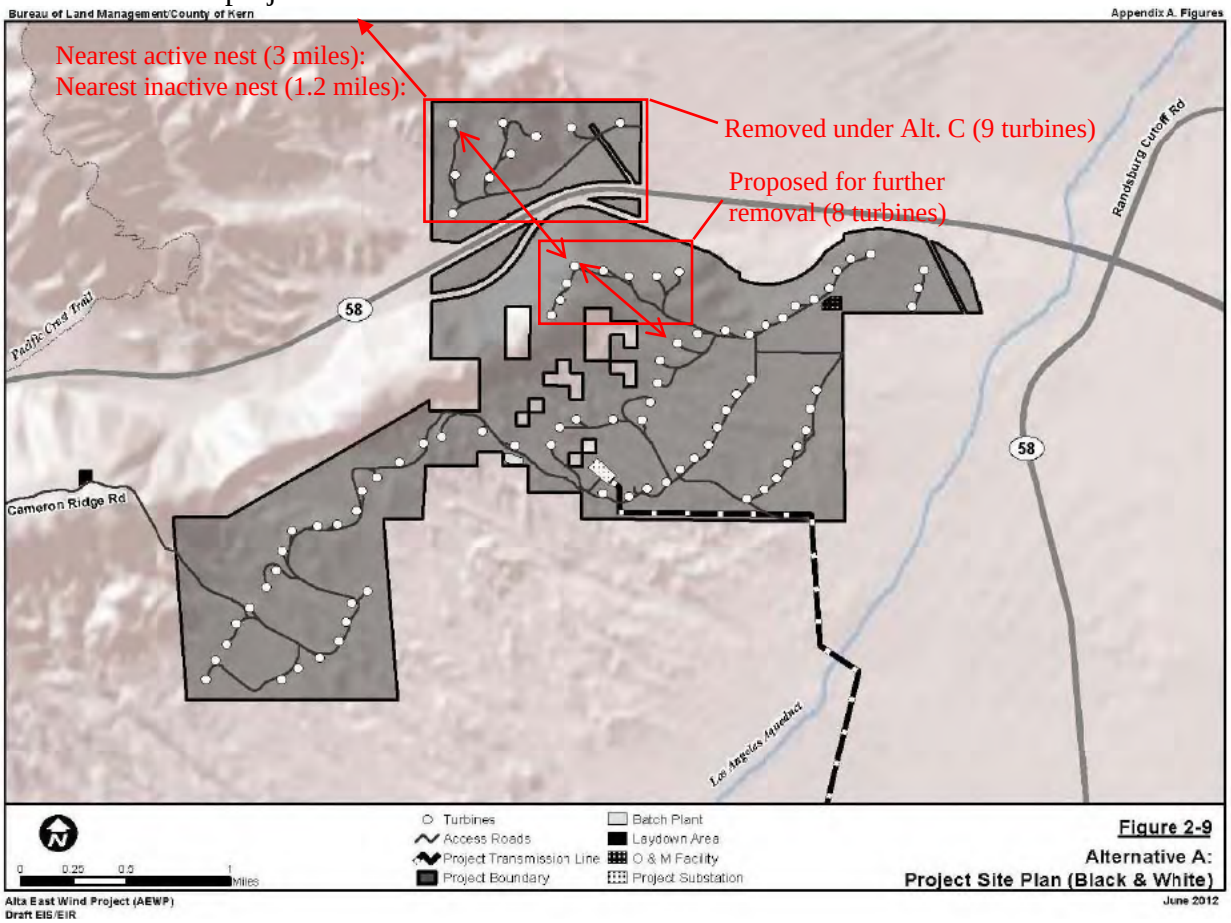

Figure 1. Proposed AEWP site from Figure 2-9 in Appendix A. Markup and comments have been added by HWI in red.

The Golden Eagle literature suggested that birds breeding in the western U.S. exploit home ranges averaging 20–33 km² in size (equivalent to a 1.6–2.0-mile-radius), depending on the area

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(reviewed in Kochert et al. [2002]), but they can be as large as 83 km² (3.2-mile radius) in southwestern Idaho (Marzluff et al. 1997). 3 cont.

Additional information from the AEWP PA/EIS/EIR also supports our proposed removal of additional turbines in the north-central project area (see Figure 1). A variety of raptor species are reported to have potential foraging habitat throughout the proposed AEWP. However, three species are specifically referenced in regards to attraction to the north area (see Table 3.21-1): Golden Eagles (i.e., present on site; nesting north of project area in Tehachapi Mountains; may forage throughout), Prairie Falcon (present on site; also nesting north of project area), and California Condor (high site potential; potential forage habitat in north/central portions of project area; telemetry bird recorded 4.3 miles northeast). Also, recorded flights of fall and winter observed Golden Eagles suggest most extensive use of the north and north central portions of the proposed project site (Appendix D8 [Appendices C3 and C4 within]). The existence of potential habitat for condors is a particular concern in light of their historic range and recent range expansion data that led the authors of the PA/EIS/EIR to conclude "development of a wind resource facility at this location is considered to pose a high risk of collision to this species" (pg. 4.21-22). 4

We caution that the potential risk for raptor and eagle mortality and the uncertainty associated with the mortality estimates derived from the avian point count data is understated in the PA/EIS/EIR. Observed raptor use of the proposed site is reported as 0.12 raptors/plot/20-minute survey (pg. 4.21-19). As is pointed out in various places, this estimate of bird use is quite low (e.g., 3rd lowest overall) compared to 43 other wind projects and proposed sites reviewed (see Appendix D8 [figure Appendix E1-4 within]). However, there is no direct comparison to the Pine Tree Wind Project <10 miles to the north of the proposed AEWP, where at least 8 Golden Eagle were killed in 12 months (pg. 3.21.22). This site was found to have relatively low bird use during pre-construction surveys and was predicted to have low mortality, but eagle mortality has been high thus far. 5

As is appropriately pointed out in the PA/EIS/EIR, pre-construction bird activity may not be directly translatable to mortality risk. However, just such a relationship is assumed in all subsequent mortality estimates in the report without proper treatment of uncertainty. The report discusses an apparent strong relationship (r-square = 66.4%) between raptor activity and collision risk at 16 new-generation plants. This "strong" relationship is used to predict <0.01 raptor fatalities/MW/yr at the AEWP site, translating to <3 raptors per year (Pg. 4.21-19). However, inspection of the regression (Appendix D8; Figure 4) shows the major flaw with the referenced relationship: namely, two California sites at the far right are the primary drivers behind the slope of the regression line and if different results had been observed for even one of these sites (or if Pine Tree had been included), the slope of the relationship may have been altered significantly. The bottom line is that this supposedly strong regression cannot be relied upon to predict fatality, as has been repeatedly pointed out by wind mortality expert Kevin Smallwood elsewhere. 6

More importantly, the estimate of 3 raptor mortalities/yr in the main report makes no reference to the associated 90% prediction interval associated with this estimate, which WEST (the contractor providing the fatality estimate) suggests "may provide a more realistic estimate of potential

raptor mortality" (Appendix D3 pg. ii). The 90% prediction interval is reported in the Appendices: 0–0.19 raptor fatalities/MW (Appendix D3, pg. 12, Appendix D8, pg. 26). This translates to 0–55 raptor mortalities/yr at the 291 MW proposed AEWP facility under Alt. C. Golden Eagles accounted for 20.9% (19/91) of the total raptor sightings during point counts (see Appendices D3 pg. 6, D8 pg. 7). Therefore, the 90% prediction interval is 0–11 Golden Eagle mortalities/yr at the AEWP site under Alt. C. Failing to report these prediction intervals in the main report may have been be a contributing factor to contradictory conclusions reached within report: e.g., "(raptor) fatality rates would be low and unlikely to result in population declines" (4.21-21); "based on mortality from the nearby projects and documented use of the AEWP site by golden eagles, risk of mortality for this species from collision with WTGs would be high". 6 cont.

Alternate means are also available to calculate estimated mortality risk are available. Raptor flight and mortality data from Altamont Pass Wind Resource Area suggests fatality of large raptors can be directly correlated with flights/hour at blade height or simply the number of birds observed/hour (Smallwood et al. 2009). Smallwood et al. (2009) suggest deaths/megawatt/year may be estimated from the following regression equation, assuming turbine size and design are not major factors in collision risk (also an assumption under the WEST approach): death/megawatt/year = -0.0081 + 0.177 times the number of birds observed/hour. Using the raptor values reported by WEST from the second year of point counts (area of interest adjusted from first year) of 0.12 raptors/plot/20-min survey (or 0.36/hr; (see Appendix D8, pg. 24) and an assumed 291 MW project (Alt. C) produces an annual raptor mortality estimate of 16 under the Smallwood model, compared to WEST's annual estimate of 3 raptors (but with 90% prediction interval of 0–55 raptors; see previous discussion). Similarly, the Smallwood model suggests 3 Golden Eagle deaths/yr (i.e., Golden Eagles represented 16.7% [8/48] of total raptor flight the second year; Appendix D8, pg. 7) compared to the WEST estimate of <1 Golden Eagle fatalities per year. Clearly, estimating fatalities with any degree of certainty is extremely difficult given our current limited knowledge of the factors that influence risk and how they might vary by species, landscape, turbine configurations, etc. Regardless, we caution that the upper bounds on the 90% prediction interval from WEST and the Smallwood estimate both suggest the site may have greater impacts on local raptors and eagles (e.g., 3–11 eagles/yr) than is discussed in the report. Additional consideration of the risk assessment, associated uncertainty, and mitigation strategies (e.g., further northern turbine curtailment; see Figure 1, this document) is warranted. Further, the potential cumulative impacts of this proposed site must also be considered in relation to the 8 recent eagle mortalities documented at the nearby (<10 miles away) Pine Tree Wind Farm and potential mortality at other active and proposed sites in the vicinity. 7

We were unable to invest adequate time to thoroughly review the draft Avian Protection Plan (APP) and Eagle Conservation Plan (ECP) accompanying the PA/EIS/EIR. However, on cursory inspection it appears the APP is incomplete and would benefit from additional attention to staff training, nest management, avian reporting, avian enhancement options, etc., as suggested in the U.S. Fish and Wildlife Service (USFWS) APP guidance (APLIC and USFWS 2005). We also disagree with the conclusion in the ECP that is "it is appropriate to conclude that potential collision risk to eagles is very low (pg. 2-20) for the various reasons previously outlined in our comments, including no consideration of the 90% prediction interval for the eagle fatality estimate in the ECP. Due to the inappropriate conclusions reached regarding risk to eagles in the PA/EIS/EIR and the ECP, the ECP is severely lacking in appropriate avoidance measures (e.g., 8

see Figure 1) and compensatory mitigation strategies to reduce and/or offset potential eagle mortalities at the proposed AEWP site. The data collected by WEST (but properly presented only in the PA/EIS/EIR Appendices) and as reviewed in our comments suggests this site is a Category 2 ("high to moderate risk to eagles/opportunity to mitigate impacts") as defined under the USFWS draft ECP guidance (USFWS 2011) rather than a Category 3 site ("minimal risk to eagles") as the project proponent's ECP (pg. 2-1) claims.

8 cont.

Thank you again for this opportunity to provide our expert comments on this proposed wind project. HawkWatch International is not opposed to the appropriate development of wind resources nor do we outright oppose this particular project. However, we caution that much additional attention must be given to the potential risk to raptors and eagles at the proposed AEWP site. Further, the potential risk at this site warrants the implementation of additional avoidance strategies and the identification of compensatory mitigation actions that may be employed in the event of eagle mortalities at the site. Please do not hesitate to contact us if you have any questions regarding our comments.

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Sincerely,

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1 Thank you for your comments. The participation of HawkWatch International, Inc. in the public review of this document is appreciated. Support for diversification of the nation's energy portfolio to include wind and other renewable energy projects and proper consideration of impacts to birds of prey is noted. The commenter commends the BLM for requiring multiple mitigation measures regarding avian impacts.

2 The commenter expresses support for Alternative C because it has the greatest potential to reduce impacts to sensitive wildlife, including golden eagle. The commenter states that the mortality risk and/or uncertainty in the assessment presented in the Draft EIS/EIR regarding impacts to raptors and golden eagle may require further curtailment of northern turbines and the inclusion of additional mitigation strategies. In fact, this already has occurred relative to the original proposal.

On April 23, 2013 the Applicant submitted a revised Plan of Development to the BLM, which presented a Revised Project and further reduced the project's footprint based on additional engineering refinements and information developed during consultation with the U.S. Fish and Wildlife Service (USFWS). The Revised Project would be located on 2,592 acres of land – 1,999 acres of BLM-managed public lands and 593 acres of land under the jurisdiction of Kern County. The Revised Project configuration consists of up to 51 wind turbine generators (WTGs) with a nameplate capacity rating of approximately 153 MWs. Forty-two of the proposed WTGs would be located on BLM-managed lands and would be capable of generating up to 126 MWs. Similar to Alternative C, the Revised Project would eliminate all of the WTGs proposed on the northern-most central parcel in the Proposed Action, which is north of State Route 58. Additional WTGs would be eliminated from the parcels located just south of State Route 58 as well as from the southeastern portion of the project site.

The USFWS has determined that the AEWP cannot avoid causing take of golden eagle even with implementation of the Eagle Conservation Plan, and has directed the Applicant to obtain take authorization under the Bald and Golden Eagle Protection Act. The Applicant submitted an application for an eagle take permit on March 4, 2013 (50 CFR 22.26(d)). USFWS will evaluate the application before determining whether to issue a permit (50 CFR 22.26(e)-(g)). If a take permit is issued, then USFWS-enforceable monitoring, annual reporting, site access, and notification obligations would be imposed to safeguard local or regional eagle populations in addition to the mitigation measures and other requirements of the BLM's ROW grant (50 CFR 22.26(c)). Upon issuance of an eagle take permit, compliance with its terms and conditions will become a condition of the AEWP's ROW grant. To the extent that the terms and conditions of the AEWP ROW grant and any subsequently issued eagle take permit are inconsistent, the terms of the permit would control. At the time such permit is issued, the BLM will determine if any additional modifications to this ROD or the ROW grant are required.

3 The commenter expresses concern regarding the completeness of golden eagle nesting aerial surveys. As noted on page 3 of Appendix D-3, *Avian Baseline Studies 2010*, and on page 4 of Appendix D-8, *Avian Baseline Studies 2011*, surveys of golden eagle nesting

sites were conducted consistent with the USFWS *Interim Golden Eagle Technical Guidance: Inventory and Monitoring Protocols; and other Recommendations in Support of Golden Eagle Management and Permit Issuance* (2010). The commenter states that removal of an additional 8 turbines from the project on the ridgeline south of Highway 58 would provide an additional buffer of 0.5-mile from active and inactive golden eagle nests. The comment is noted.

The BLM has considered the best available information in the analysis of operational impacts to golden eagle and determined that the biological survey data documented in Appendices D-3 through D-8 of the Draft EIS/EIR was adequate to assess bird use at specific locations within the project area. As illustrated in the Appendices, fixed-point bird use survey points were distributed throughout and adjacent to the AEWP site and provide adequate coverage of the site. Alternative C was developed to eliminate wind development in this portion of the project area in order to minimize impacts to golden eagle. The Applicant submitted an application for an eagle take permit on March 4, 2013, and is developing an Eagle Conservation Plan as a component of this process. A draft version of the Eagle Conservation Plan was included in Appendix D-30 of the Draft EIS/EIR. Please also see Response to Comment 2.

4 The commenter cites information in Draft EIS/EIR Table 3.21-1, *Special-Status Animals Present or With Potential to Occur at the AEWP Site*, regarding golden eagle, prairie falcon, and California condor (including foraging habitat, presence on-site, and nesting locations) as additional support for the commenter's proposed removal of 8 turbines from the project. The comment is noted. Please see Response to Comment 3.

5 The commenter expresses concern that the potential risk for raptor and eagle mortality and the uncertainty associated with the mortality estimates is understated in the Draft EIS/EIR. The commenter states that there is no direct comparison of the AEWP to the Pine Tree Wind Project regarding golden eagle mortality. Data from the Pine Tree Wind Farm was considered in the analysis in the Draft EIS/EIR on potential impacts to golden eagle as listed on page 4.21-38 under "Golden Eagle." As noted on page 4.21-40, "The Proposed Action and most of the other wind energy projects in the desert portions of the cumulative analysis are not expected to (individually) result in mortality levels comparable to those recorded at Pine Tree Wind Development because of differences in terrain, habitat, and proximity to known mitigation corridors."

6 The commenter states that the apparent strong relationship between raptor activity and collision risk is flawed because the regression analysis (included in Appendix D-8 and referenced on page 4.21-19 of the Draft EIS/EIR) is highly influenced by two California sites that are the primary drivers of the slope of the regression line. If different results had been observed for either site, or if the Pine Tree site would have been included as a data source in the regression analysis, the slope of the relationship may have been altered significantly. Please see Response to Comment 2.

7 The commenter identifies alternate methods of calculating raptor and golden eagle mortality risk, but does not state that the method used was flawed, or that it led to

inadequate or inaccurate results. The commenter notes that estimating fatalities is difficult given the range of factors that influence risk and how they might vary by species, location, turbine configurations, etc. The commenter states that additional consideration of the risk assessment, associated uncertainty, and mitigation strategies is warranted.

Measures to reduce impacts to golden eagles are described in Mitigation Measures 4.21-1 (Designated Biologist), 4.21-2 (Wildlife Impact Avoidance and Minimization), 4.21-3 (Pre-Construction Surveys and Minimization Measures for Special-Status Wildlife and Nesting Birds), 4.17-1 (Habitat Restoration and Revegetation Plan), 4.17-5 (Weed Control Plan), 4.2-1 (Construction Fugitive Dust Emission Reduction), and 4.2-3 (Operation Fugitive Dust and Equipment Emission Reduction). As described in the Draft EIS/EIR, these measures would require biological monitoring during construction activities, worker environmental awareness training, restoration of temporarily impacted areas, compensation for permanently impacted habitat at a minimum 1:1 ratio, minimization of impact areas, and control of fugitive dust.

Mitigation Measure 4.21-3 specifically addresses golden eagles and requires preconstruction nest surveys and a ¼-mile no-activity buffer around any active nests with a direct line of sight to the work area. If the work area is not within direct view of the nest, the no-disturbance buffer would be 660 feet, unless adjusted in consultation with CDFG and/or USFWS. Operational impacts to golden eagles would be minimized through implementation of Mitigation Measures 4.21-6 (Avian and Bat Protection Plan), 4.21-8 (Lighting Specifications to Minimize Bird and Bat Collisions), 4.21-9 (Minimize Avian and Bat Turbine Strikes), 4.21-10 (Post-Construction Breeding Monitoring), 4.21-11 (Post-Construction Avian and Bat Mortality Monitoring), and 4.21-12 (Supplemental Measures for Unanticipated Significant Impacts). Please also see Response to Comment 2.

8 The commenter states that cursory inspection of the Avian Protection Plan and Eagle Conservation Plan suggests these plans are incomplete. Please see Response to Comment 2.

9 Please see Response to Comment 2.